

CLAIMS

What is claimed is:

1. A powder coating composition for producing a high temperature resistant coating, comprising

- 5 (a) at least one polysiloxane; and
- (b) from about 0.01 to 90% by weight, based on the total weight of the polymer content, of at least one high temperature matrix material that softens and exhibits some flow in the range from about 300 to 700 °C.

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2. The composition of claim 1 wherein the matrix material comprises at least 10% of the polymer content.

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3. The composition of claim 2 wherein the coating formed from the powder coating composition does not delaminate after exposure to temperatures of at least 550°C.

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4. The composition of claim 2 wherein the composition further comprises from about 5 to 50% by weight of the polymer content of a reinforcing filler.

5. The composition of claim 2 wherein the matrix material is inorganic glass particles selected from the group consisting of hollow spheroids, solid spheroids, fibers, and frit.

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6. The composition of claim 5 wherein the high temperature matrix material is selected from inorganic glass particles with a specific gravity less than 2.

7. The powder of claim 1, wherein the matrix material is selected from inorganic crystalline particles.

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8. A process for making a heat-resistant powder coating composition, comprising:

- (a) forming the powder coating of claim 1, less the high temperature matrix material, by standard melt-mixing processes; and
- 5 (b) blending the matrix material with the powder.

9. A process for making a heat resistant powder coating, comprising:

- (a) blending the matrix material with the polysiloxane prior to melt mixing; and
- 10 (b) transforming the melt mixed material to a powder coating using standard powder manufacturing processes.

10. An article having coated and cured thereon, at least one coating layer formed from the powder coating composition of claim 1.

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11 The article of claim 10 wherein the coating has a thickness of at least about 40 microns.

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